PEACE/WILLISTON
FISH & WILDLIFE
COMPENSATION
PROGRAM

Branham Slide 1993 Prescribed Burn

BCHydro

M. D. Wood
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The Peace/Williston Fish & Wildlife Compensation Program is a cooperative venture of BC Hydro and the provincial fish and wildlife management agencies, supported by funding from BC Hydro. The Program was established to enhance and protect fish and wildlife resources affected by the construction of the W.A.C. Bennett and Peace Canyon dams on the Peace River, and the subsequent creation of the Williston and Dinosaur Reservoirs.

Peace/Williston Fish and Wildlife Compensation Program, 1011 Fourth Ave. 3rd Floor, Prince George B.C. V2L 3H9

Website: *www.bchydro.bc.ca/environment/initiatives/pwcp/*

This report has been approved by the Peace/Williston Fish and Wildlife Compensation Program Fish Technical Committee.

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Author(s): Mari D. Wood[1]
Address(es): [1] Peace/Williston Fish and Wildlife Compensation Program, 1011 Fourth Ave., 3rd Floor Prince George, B.C. V2L 3H9

BACKGROUND AND OBJECTIVES

In May 1993, prescribed burning was conducted at Branham Slide on the north side of the Peace Arm of the Williston Reservoir. The primary objective for burning the south facing deciduous slopes was to increase the availability and quality of winter and spring forage for ungulates. The area receives moderate use by Stone's sheep, elk, mule deer and moose, and has the potential to support high use by these species given increased forage availability and quality.

Prescribed burning of the approximately 1300 hectare area (site A7) at Branham Slide was attempted in the spring of 1992, and resulted in small patches being burned (totalling about 225 hectares). Site A7 was targeted again for burning in the spring of 1993 in hopes of achieving greater burn coverage.

AREA DESCRIPTION:

Branham Slide lies between Schooler Creek and Adams Creek on the north side of the Peace Arm of the Williston Reservoir (Figure 1). The targeted burn area, site A7 (1300 ha), was bordered by Horseshoe Hill Creek on the west, and Adams Creek on the east (Figure 2). It falls within the Boreal White and Black Spruce (BWBSwk1) and Engelmann Spruce-Subalpine Fir (ESSFmv4) biogeoclimatic zones between 600 and 1300 metres in elevation, with a southeast aspect and a moderate 25-30% slope. Overmature aspen predominated on the site, with some small pockets of spruce in the west on areas of slightly wetter relief. There was very little understory vegetation and coarse woody debris.

The area is rated as Class 1, 2 and 3 winter range for moose, elk, Stone's sheep and mule deer (Backmeyer, 1994b). In the early 1980's, only a small herd of about 20 Rocky Mountain elk were known to inhabit the slopes along the north shore of the Reservoir (Churchill, 1984). A transplant of elk to the area was proposed, and in 1985, 107 elk were transported from the East Kootenays and released at Dunlevy Lake, about 12 km east of Branham Slide (Churchill, 1987). An additional 38 elk from the East Kootenays were released in the same area in 1987 (Harper, 1987). Prescribed burns in the Dunlevy and Aylard areas were conducted in the late 1980's to enhance forage production for the elk and other ungulates in the area. Incidental sightings and recent aerial surveys indicate a significant increase in the population of elk along the north shore of the Reservoir (Backmeyer, 1994a).

BURN DETAILS:

Pre-burn preparations at the Branham Slide site included the construction of helipads in 1992 by contracted crews, and an aerial pre-burn survey of the targeted burn area on May 3, 1993. Pre-burning was determined not to be required as the site was protected from fire escape by creek draws and ridges.

Figure 1. Branham Slide prescribed burn site.

Figure 2. Proposed burn site A7, and areas burned in 1993.

Three attempts were made to burn site A7 in the spring of 1993 (Table 1). More mature deciduous trees were present on the west half of site A7 than the the east half, thus burning the west was given a higher priority and was the focus of the burning effort. Approximately 17,000 Aerial Ignition Devices (AID's balls) were used in the burn attempts. The first ignition attempt on May 3 was impeded by cool temperatures and a fairly high relative humidity, resulting in a patchy and incomplete burn. Cool temperatures, a high relative humidity and gusty winds during the second attempt again resulted in a patchy burn. The third ignition attempt was cancelled due to unsuitable weather conditions.

Table 1. Ignition results at Branham Slide burn site A7.

Date	Temp (°C)	Relative Humidity	Wind (km/hr)	Comments
May 3, 1993	13	high	21	patchy and incomplete
May 8, 1993	13.2	21%	21-30	wind gusting up to 30 km/hr, difficult ignition, patchy burn
May 9, 1993	n/a	n/a	n/a	cancelled due to unsuitable weather conditions

The attempts at burning site A7 resulted in approximately 270 hectares burned in small patches (about 20% of the targeted burn area of 1330 hectares) (Figure 2). The patches burned were primarily in the western half of the site. Overall, the burn was patchy, cool and incomplete. The total cost of conducting the burns was $15, 046 (Table 2).

Table 2. Branham burn cost breakdown.

Pre-burn Assess	Aircraft	AIDS balls	Mop-up Crew	PWCP Staff Wages	Travel & Accom	Post-burn Monitor	Other	TOTAL
1,225	7,600	966	0	2,156	500	2,515	84	$15,046

All attempts at burning the site were conducted by B.C. Environment staff in Fort St. John, with the approval and cooperation of the Dawson Creek Forest District. Funding was supplied by the Peace/Williston Fish and Wildlife Compensation Program (PWCP).

Two additional sites at Butler Ridge east of Dunlevy Creek (B4 and B5) were scheduled for burning in the spring of 1993, but were cancelled due to unsuitable weather conditions. Helipads had also been constructed at these sites in 1992.

FUTURE MONITORING:

The Peace/Williston Compensation Program attempts to conduct prescribed burns on a annual basis, alternating between the Mackenzie and Dawson Creek Forest Districts. The response of vegetation to these prescribed fires will be monitored at one site within the Dawson Creek Forest District, and two sites in the Mackenzie Forest District (one in the north and one in the south). In the Dawson Creek Forest District, the Butler Ridge site along the Peace Arm has been selected for long-term vegetation monitoring. Grass production as a result of prescribed burning benefits grazers such as Stone's sheep and elk, while aspen, willow and shrubs will provide browse for moose and mule deer. Vegetation plots monitored over time will reveal changes in the vegetation structure and diversity in burned and unburned areas.

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